

## JAMES RIVER BASIN

## 02039000 BUFFALO CREEK NEAR HAMPDEN SYDNEY, VA

**LOCATION.**--Lat 37°15'25", long 78°29'12", Prince Edward County, Hydrologic Unit 02080207, on left bank 100 ft upstream from bridge on State Highway 658, 0.8 mi upstream from Locket Creek, 2.0 mi northwest of Hampden Sydney, and 6.0 mi southwest of Farmville.

**DRAINAGE AREA.**--69.7 mi<sup>2</sup>.

**PERIOD OF RECORD.**--August 1946 to current year.

**REVISED RECORDS.**--WSP 1303: 1948-50(M). WSP 2104: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 339.19 ft above sea level (levels by Virginia Department of Transportation). Prior to Aug. 19, 1953, nonrecording gage at same site and datum.

**REMARKS.**--Records good except for period with ice effect, Jan. 22-30, which is fair. Maximum discharge, 9,160 ft<sup>3</sup>/s, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 11.96 ft. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location by the Virginia Department of Environmental Quality - Water Division.

**COOPERATION.**--Records were provided by the Virginia Department of Environmental Quality - Water Division.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood in August 1940 reached a stage of about 15 ft, from information by local resident.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar 17	0900	*639	*6.16	Apr 18	1400	603	6.04

Minimum discharge, 12 ft<sup>3</sup>/s, Aug. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	30	38	24	93	44	61	57	42	28	21	20
2	66	43	34	24	77	43	57	53	37	25	20	21
3	48	58	32	24	67	41	56	48	34	23	19	33
4	40	47	31	39	69	38	57	46	31	22	19	29
5	38	42	30	121	76	37	55	43	30	22	21	25
6	33	39	32	74	71	35	51	42	39	26	19	22
7	29	38	31	54	65	34	48	40	35	23	19	20
8	26	36	29	44	64	33	51	39	32	22	22	18
9	26	34	27	44	61	33	78	38	30	20	19	17
10	29	33	27	156	61	32	63	36	28	19	18	16
11	30	33	27	283	63	31	56	34	27	18	17	16
12	28	32	26	151	61	34	52	33	25	21	16	15
13	26	32	25	91	55	31	48	32	25	20	15	15
14	26	31	59	66	62	31	48	31	26	20	15	15
15	25	31	78	55	63	30	48	30	33	19	14	28
16	24	30	59	50	55	55	49	29	35	18	14	20
17	26	28	48	46	50	483	57	29	32	17	13	18
18	34	28	41	41	132	249	461	29	30	16	14	16
19	29	27	36	40	220	114	370	29	30	18	14	19
20	39	27	34	44	118	84	199	32	29	40	14	20
21	50	27	35	44	82	195	110	39	28	28	13	18
22	43	27	43	e38	67	162	81	49	27	23	13	17
23	39	27	40	e31	58	102	68	52	25	22	13	17
24	35	27	36	e33	53	81	60	44	24	27	12	17
25	32	28	33	e36	48	71	97	38	23	23	12	20
26	32	41	31	e32	45	85	196	35	23	23	12	38
27	32	97	30	e30	44	88	120	35	22	22	15	30
28	30	76	29	e28	53	170	84	56	23	20	35	24
29	29	57	27	e35	48	101	73	71	33	23	25	21
30	29	45	26	e46	---	78	64	62	32	22	22	19
31	30	---	25	106	---	68	---	49	---	21	22	---
TOTAL	1109	1151	1099	1930	2081	2713	2918	1280	890	691	537	624
MEAN	35.8	38.4	35.5	62.3	71.8	87.5	97.3	41.3	29.7	22.3	17.3	20.8
MAX	106	97	78	283	220	483	461	71	42	40	35	38
MIN	24	27	25	24	44	30	48	29	22	16	12	15
CFSM	.51	.55	.51	.89	1.03	1.26	1.40	.59	.43	.32	.25	.30
IN.	.59	.61	.59	1.03	1.11	1.45	1.56	.68	.48	.37	.29	.33

## 02039000 BUFFALO CREEK NEAR HAMPDEN SYDNEY, VA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.6	63.6	71.7	91.5	100	112	92.6	66.2	49.6	39.1	40.4	41.1
MAX	365	315	157	313	295	324	256	173	294	129	260	168
(WY)	1972	1986	1997	1978	1979	1993	1983	1978	1972	1989	1955	1979
MIN	9.94	14.6	18.7	25.3	36.9	37.5	29.4	23.4	11.2	14.0	9.00	6.67
(WY)	1971	1970	1966	1966	1968	1981	1967	1969	1970	1970	1999	1970

## SUMMARY STATISTICS

## FOR 1999 CALENDAR YEAR

## FOR 2000 WATER YEAR

## WATER YEARS 1947 - 2000

ANNUAL TOTAL	15452.3	17023	
ANNUAL MEAN	42.3	46.5	68.0
HIGHEST ANNUAL MEAN			134
LOWEST ANNUAL MEAN			28.5
HIGHEST DAILY MEAN	528	Jan 25	4940
LOWEST DAILY MEAN	6.7	aAug 19	e2.7
ANNUAL SEVEN-DAY MINIMUM	7.0	Aug 18	2.9
INSTANTANEOUS PEAK FLOW			639
INSTANTANEOUS PEAK STAGE			6.16
INSTANTANEOUS LOW FLOW			12
ANNUAL RUNOFF (CFSM)	.61	.67	.97
ANNUAL RUNOFF (INCHES)	8.25	9.09	13.25
10 PERCENT EXCEEDS	72	78	119
50 PERCENT EXCEEDS	32	33	43
90 PERCENT EXCEEDS	11	19	18

a Also Aug. 20, 1999.

b Also Oct. 8, 1970.

c Not determined.

d Probably occurred Oct. 7, 8, 1970.

e Estimated.

